A NOVEL FUNCTIONAL BIOASSAY PREDICTS 90-DAY SURVIVAL IN PATIENTS WITH SEVERE ALCOHOLIC HEPATITIS

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Method We re-evaluated patients randomised and dosed in OCA 10 mg (n=73), OCA 5–10 mg (n=70), 33 patients titrated from 5 to 10 mg at Month 6), or PBO (n=73) groups during DB treatment. In the OLE, all patients were initially treated with 5 mg OCA with the option to increase to 10 mg (or later decrease) based on response and tolerability every 3 months.

Non-invasive measures of liver fibrosis that were assessed were APRI and liver stiffness measurements (LSM) by transient elastography.

Results APRI was significantly reduced from baseline to DB Month 12 in both OCA–treated groups compared to PBO (p<0.01). PBO patients who initiated OCA during the OLE phase and patients randomised to OCA 5–10 mg had significant reductions from baseline to OLE Month 12 in mean APRI score (p<0.05). The mean APRI score in OCA 10 mg was reduced, but not significant at OLE Month 12 compared to baseline. During DB and OLE phases, while not significant, the OCA 10 mg group had mean reductions in LSM, while both OCA 5–10 mg and PBO groups had mean increases in LSM (Table).

Conclusion Both LSM and APRI, as non-invasive measures of liver fibrosis, have been found to be effective in predicting outcome in patients with PBC. DB and OLE treatment with OCA resulted in a mean reduction in liver stiffness and significant improvements in APRI suggesting that with long-term use, OCA has the potential to improve long term outcomes for patients.


REFERENCES

Disclosure of Interest None Declared
have previously reported that a functional bioassay measuring in vitro corticosteroid sensitivity, DILPA, accurately predicts 6 month survival in patients with SAH. However, due to its requirement for radiation it lacked clinical translatability and a second generation assay, bromodeoxyuridine (BrdU) incorporation in lymphocyte steroid sensitivity assay (BLISS) assay, has been developed and validated in healthy controls. In this study we aimed to generate preliminary data to determine whether the BLISS assay can be used to predict clinical outcome in patients with SAH.

**Method** Peripheral blood was drawn from patients with a clinical diagnosis of SAH (discriminant function [DF] >32). All participants gave informed consent and ethical approval was obtained from the NHS Health Research Authority. All patients were treated with corticosteroids for 28 days. The primary outcome measure was 90 day survival. Peripheral blood mononuclear cells, isolated by density gradient centrifugation, were stimulated with lymphocyte mitogen in the absence or presence of dexamethasone and cultured for 48 hours per previously described protocol. Proliferation was determined by measuring BrdU incorporation using a commercial kit. The maximum suppression of proliferation by corticosteroids (Imax) was determined.

**Results** 10 patients were recruited (7 female, median age 50) with mean DF 75. 6 patients survived to 90 days and had a significantly higher Imax than non-survivors (27% v –12%; p=0.01) with clear separation between groups (figure 1). Survivors also had lower Lille score than non-survivors (0.20 v 0.79; p=0.02) but in applying the established threshold of 0.45, 1 patient was misclassified as a steroid non-responder. However, Imax did not correlate with Lille score (r²=0.21) or percentage change in bilirubin from day 0 to day 7 (r²=0.10).

**Conclusion** The BLISS assay clearly differentiates survivors from non-survivors at 90 days and shows potential for use as a stratification tool in the initial management of patients with SAH. Further validation in a larger multicentre cohort is planned.

**REFERENCES**

**Disclosure of Interest** None Declared